



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/814,192	04/01/2004	Hiromichi Ishibashi	2004_0527	6450

513 7590 08/10/2005

WENDEROTH, LIND & PONACK, L.L.P.
2033 K STREET N. W.
SUITE 800
WASHINGTON, DC 20006-1021

EXAMINER

BATTAGLIA, MICHAEL V

ART UNIT	PAPER NUMBER
----------	--------------

2652

DATE MAILED: 08/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/814,192	ISHIBASHI ET AL.	
	Examiner	Art Unit	
	Michael V. Battaglia	2652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/610,364.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Election/Restrictions

1. In view of the preliminary amendment filed April 1, 2005 canceling claims 1-15 and adding new claim 16, the election requirement mailed July 13, 2005 is withdrawn and the following action is deemed appropriate.

Priority

2. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 09/610,364, filed on July 5, 2000.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zucker (US 5,802,029) in view of Ueki (US 6,052,344) and further in view of Horigome et al (hereafter Horigome) (US 5,729,514).

Zucker discloses an apparatus for reproducing information in an optical disk of a first recording density and in another optical disk of a second recording density lower than the first recording density (Col. 3, lines 53-60), said apparatus comprising: an optical head (Fig. 6) having a light source (Fig. 6, element LD) operable to emit a main beam and sub-beams onto adjacent tracks formed in an optical disk (Figs. 2 and 3); a photodetector (Fig. 6, element PD) operable to

Art Unit: 2652

detect reflection lights of the main beam and the sub-beams emitted by said light source from the optical disk (Col. 4, lines 12-16); a reproduction device operable to reproduce information in the optical disk based on signals received from said photodetector (Col. 1, lines 7-20 and Fig. 5, element FH); and a tracking controller (Fig. 4) operable to control tracking of said optical head having said light source based on output signals of said photodetector (Col. 4, lines 26-36), wherein said light source emits the main beam to have a size in correspondence to a resolution of the optical disk of the first track pitch in a direction tangent to the tracks (Figs. 2-3) and has a shape longer in a direction perpendicular to the tracks (note that main beam has a shape longer in a direction perpendicular to the tracks than the width of a pit in a direction perpendicular to the tracks in Figs. 2 and 3), and wherein said tracking controller comprises a tracking error signal generator operable to generate a tracking error signal based on signals of the reflection light of the main beam divided into a plurality of portions and of the sub-beams detected by said photodetector when information in the optical disk of the first recording density is reproduced (Fig. 4 and Col. 4, lines 29-32), and operable to generate the tracking error signal based on signals of the reflection light of the sub-beams detected by said photodetector when information in the optical disk of the second recording density is reproduced (Fig. 4 and Col. 4, lines 26-29). Zucker does not disclose that said reproduction device has a first canceler operable to cancel cross talk components from adjacent tracks included in signals reproduced from reflection light of the main beam by using signals reproduced from reflection lights of the sub-beams, and does not disclose that the tracking error signal generator is operable to generate a tracking error signal based on a phase difference between signals of the reflection light of the main beam divided into a plurality of portions detected by said photodetector when information in the optical disk of the first recording density is reproduced.

Ueki discloses an apparatus for reproducing information in an optical disk of a first recording density and in another optical disk of a second recording density lower than the first recording density (Col. 4, lines 52-54), the apparatus comprising a tracking error signal generator operable to generate a tracking error signal based on a phase difference between signals of the reflection light of the main beam divided into a plurality of portions detected by said photodetector when information in the optical disk of the first recording density is reproduced (Fig. 1 and Col. 6, lines 20-24), and operable to generate the tracking error signal based on signals of the reflection light of the sub-beams detected by said photodetector when information in the optical disk of the second recording density is reproduced (Fig. 1 and Col. 6, lines 16-20).

Therefore, the tracking error signal generator of Ueki was an art-recognized equivalent to the tracking error signal generator of Zucker at the time of the invention for the purpose of generating a tracking error signal when information in an optical disk of a first recording density is reproduced and when information in another optical disk of a second recording density lower than the first recording density is reproduced and one of ordinary skill would have found it obvious to use either one including the tracking error signal generator of Ueki, which is operable to generate a tracking error signal based on a phase difference between signals of the reflection light of the main beam divided into a plurality of portions detected by said photodetector when information in the optical disk of the first recording density is reproduced, for generating a tracking error signal when information in the optical disk of the first recording density of Zucker is reproduced and when information in the optical disk of a second recording density of Zucker is reproduced.

Horigome discloses an apparatus for reproducing information that has a first canceler (Figs. 1 and 4, element 8) operable to cancel cross talk components from adjacent tracks included in signals reproduced from reflection light of a main beam (Figs. 1, 2 and 4, element MRF) by using

Art Unit: 2652

signals reproduced from reflection lights of sub-beams (Figs. 1, 2 and 4, elements ERF and FRF) (Col. 4, lines 24-28).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made for the apparatus of Zucker to include the first canceler of Horigome as suggested by Horigome, the motivation being to cancel cross talk components from adjacent tracks included in signals reproduced from reflection light of the main beam of Zucker by using signals reproduced from reflection lights of the sub-beams of Zucker.

Citation of Relevant Prior Art

4. Ogata et al (US 6,614,720) disclose an apparatus for reproducing information in an optical disk of a first recording density and in another optical disk of a second recording density lower than the first recording density (Fig. 1 and Col. 8, lines 48-63) using a main beam and sub-beams each having a shape longer in a direction perpendicular to the tracks than in a direction tangent to the tracks (Fig. 4). Jongenelis et al (US 5,235,583) and Takahashi et al (US 5,708,636) disclose a light source that emits a main beam and sub-beams, wherein the main beam has a size in correspondence to a resolution of the optical disk of a higher recording density to reproduce information from both a higher and lower resolution optical disk. Kawasaki (US 5,544,141) discloses a first canceler operable to cancel cross talk components from adjacent tracks included in signals reproduced from reflection light of a main beam by using signals reproduced from reflection lights of sub-beams.

Art Unit: 2652

Conclusion

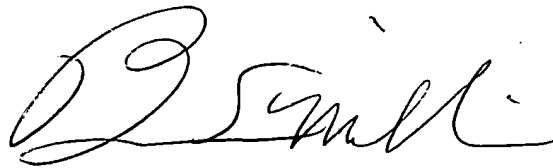
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael V. Battaglia whose telephone number is (571) 272-7568. The examiner can normally be reached on 5-4/9 Plan with 1st Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T. Nguyen can be reached on (571) 272-7579. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael Battaglia



BRIAN E. MILLER
PATENT EXAMINER